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To: RTPMAINHUB.INTERNET (JOHNSON-STEVE)
Date: 10/27/99 7:11pm
Subject: Sauget Area 1 - TSCA Technical Requirements

Steve

Based on our meeting last Tuesday and a review of the technical requirements in the TSCA regulations, I think the issues we need to address during design of the on-site containment cell for PCB-containing sediments from Creek Sector B are as follows:

1.0 Containment Cell Subsoil

Three feet of compacted clay with K equal to or less than $10E-7$ cm/sec, 30% passing a No. 200 sieve, liquid limit > 30 and plastic index > 15.

Notes:

- 1) It may be possible to demonstrate that a GCL is equivalent to three feet of compacted clay

2.0 Synthetic Membrane Liners

Chemically compatible with PCBs
Minimum thickness of 30 mils
Adequate soil underlining
Adequate soil cover
Prevent excess stress on liner
Prevent rupture of liner

Notes:

- 1) We will use RCRA minimum technology standards in cell design

3.0 Hydrologic Conditions

Depth to groundwater > 50 ft.
Closest groundwater wells and use
Avoid floodplains
Avoid shorelands
Avoid groundwater recharge areas
No hydraulic connection with standing or flowing surface water

Notes:

- 1) A double liner is needed if DTW < 50 ft.

4.0 Flood Protection

If below 100 year flood elevation, install surface water diversion dikes with elevation two feet higher than 100 year flood

If above 100 year flood elevation, install diversion structures for 25 year, 24 hour storm

Notes:

- 1) Explain that site is protected by a levee/floodwall system designed and maintained by the USACE.
- 2) Explain that the site was not flooded during the 1993 flood which was the largest recorded flood in St. Louis.
- 3) Explain that a closed landfill (Sauget Area 2, Site R) was in the area inundated during the 1993 flood and that it survived intact
- 4) Design flat slopes that will not erode as flood waters recede.
- 5) Build a cap that will not float during flood conditions by venting trapped air or by weighting with a granite gravel cover.

5.0 Topography

Low to moderate relief

6.0 Compound Leachate Collection

Needed if: sitting on sand or gravel
 lined pit is excavated into permeable soil

Needed with: semi-liquid or leachable wastes
 leachable solid wastes

7.0 Surface Water Monitoring

Baseline sampling prior to start of operations

Monthly sampling during operations

Semiannual sampling after operations

Parameters - PCBs, pH, S.C., chlorinated organics

8.0 Groundwater Monitoring

Three wells (minimum) on flow line through center of facility

Well Construction - cased, grouted with cement, removable cap

Sampling - purge one well volume before sampling, treat discharge to state

or federal standards
Parameters - PCBs, pH, S.C., chlorinated organics

9.0 Support Facilities

Six ft. high woven mesh fence
Roads maintained to support site O&M without causing safety or nuisance problems or hazardous conditions
Operate and maintain to prevent safety problems or hazardous conditions resulting from spilled liquids and windblown materials

I understand that we need to demonstrate that our design will not cause unreasonable risk to human health and the environment. We also need to show how the intent of each technical objective is met.

Have I missed any TSCA technical issues? Have I included issues that don't need to be addressed?

I appreciate your help and am looking forward to working with you on this project.

Bruce

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